

Remarks

The Office Action dated 16 May 2003 has been received and duly noted. Each of the independent claims 1, 11, and 16 have been amended to more clearly distinguish the present invention from the cited references.

The Examiner rejected the originally filed claims as being obvious in view of U.S. Patent No. 6,079,340. The Examiner recognizes that the '340 patent does not disclose the use of vehicle speed calculated by a GPS system to control delivery rate, but contends this would have been obvious to one of ordinary skill in the art. The Examiner reasons that merely because the GPS receivers 176 and 178 were capable of calculating speed, it would have necessarily been obvious to use them to calculate speed.

Applicant respectfully disagrees with Examiner's reasoning. Although the '340 patent discloses a pair of GPS receivers 176 and 178, it specifically teaches using radar or magnetic wheel speed sensors, instead, to provide speed signals. Nowhere does the reference disclose using the on-board GPS receivers to calculate speed. The inventor was certainly skilled in the art and aware of GPS technology, and yet despite having two GPS sensor on board, chose instead to teach the use of radar or magnetic wheel speed sensors. If using the GPS receivers to calculate speed in this particular invention were obvious, this alternative would surely have been disclosed.

Amended Version of the Claims

1. **(Amended)** A regulator for outputting a ~~ground-speed~~ signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals; and

a converter for converting the ~~vehicle~~ ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses to the agricultural dispenser.

4. **(Amended)** The regulator as defined in Claim 1, wherein the GPS unit outputs an updated ~~velocity~~ signal ground speed signal at least every two seconds.

5. **(Amended)** A GPS receiver as defined in Claim 1, wherein the GPS unit outputs an updated ~~velocity~~ ground speed signal at least every second.

9. **(Amended)** The regulator as defined in Claim 1, further comprising:
an operator input controller for varying a selected rate distributor for the agricultural dispenser, the operator input controller and the ~~vehicle~~ ground speed signal determining the frequency of the series of pulses.

11. **(Amended)** A regulator for outputting a ~~ground-speed~~ signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals;

a converter for converting the ~~vehicle~~ ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses to the agricultural dispenser;

the GPS unit and the converter being mounted on a self-propelled vehicle;
and

a wireline electrically interconnecting the converter with the dispenser positioned on a trailed implement.

13. (Amended) A GPS receiver as defined in Claim 11, wherein the GPS unit outputs an updated ~~velocity~~ ground speed signal at least every second.

16. (Amended) A method of outputting a ground speed signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the method comprising:

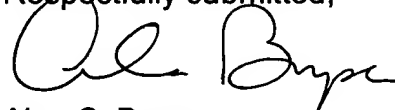
providing a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals;

converting the ~~vehicle~~ ground speed signal to a series of pulses having a frequency indicative of the ground speed signal; and

outputting the series of pulses to the agricultural dispenser.

21. (Amended) The method as defined in Claim 15, further comprising:
providing an operator input controller for varying a selected rate distribution for the agricultural dispenser, the operator input controller and the ~~vehicle~~ ground speed signal determining the frequency of the series of pulses.

Respectfully submitted,



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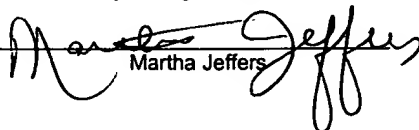
Date: August 19, 2003

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By:


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